

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. - 10. (Canceled)

11. (New) A process for producing a solution of a gas in a liquid in which the gas is soluble, the solution having a predetermined concentration of the gas up to saturation, the process comprising: contacting the gas and the liquid in a proportion corresponding to the predetermined concentration of the solution and forming a stream of the gas and the liquid which passes through a common conduit whereby the gas and the liquid repeatedly intermix under the action of gravity before the gas and the liquid separate so that the gas is substantially absorbed in the liquid thereby forming the solution having the predetermined concentration.

12. (New) The process of claim 11, wherein the stream is subjected to turbulent flow for intensifying the intermixing of the gas and the liquid.

13. (New) The process of claim 12, wherein the intermixing is conducted at a pressure above atmospheric pressure.

14. (New) The process of claim 13, wherein the gas comprises chlorine and the liquid comprises water.

15. (New) The process of claim 11, wherein the intermixing is conducted at a pressure above atmospheric pressure.

16. (New) The process of claim 15, wherein the gas comprises chlorine and the liquid comprises water.

17. (New) The process of claim 11, wherein the gas comprises chlorine and the liquid comprises water.

18. (New) An apparatus for conducting the process of claim 1, wherein the apparatus comprises a continuous tubular coil formed with a plurality of upwardly and downwardly directed tubular parts.

19. (New) The apparatus of claim 18, wherein elements producing turbulence are provided in the continuous tubular coil.

20. (New) The apparatus of claim 19, wherein a pressure sustaining valve which maintains a predetermined overpressure is located in the common conduit and the common conduit is connected to the continuous tubular coil.

21. (New) The apparatus of claim 20, wherein at least the continuous tubular coil is installed in a protective pressure-proof enclosure.

22. (New) The apparatus of claim 21, wherein continuous tubular coil is provided with at least one of packing bodies and folds.

23. (New) The apparatus of claim 21, wherein the continuous tubular coil is a horizontal helix.

24. (New) The apparatus of claim 18, wherein a pressure sustaining valve which maintains a predetermined overpressure is located in the common conduit and the common conduit is connected to the continuous tubular coil.

25. (New) The apparatus of claim 18, wherein at least the continuous tubular coil is installed in a protective pressure-proof enclosure.

26. (New) The apparatus of claim 19, wherein continuous tubular coil is provided with at least one of packing bodies and folds.

27. (New) The apparatus of claim 18, wherein the continuous tubular coil is a horizontal helix.